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Jumbo

By team and excursion train people came to see Jumbo, the white elephant, at Belle Plaine back in the eighties. This curiosity was not confined in a circus tent, nor fed on peanuts, nor guided around by the jabs of dusky natives. In fact the whole trouble with Jumbo was that he would not "keep anything down" and refused to be governed at all. For over a year all attempts to harness him were futile and he ran wild to the great enjoyment of the youngsters and curious travellers. Jumbo, one of the wonders of the world, was an artesian well.

That Belle Plaine was the center of an extensive artesian area was discovered in the spring of 1882. Several farmers who had put down deep wells were amazed to see the water rise within twenty-five feet of the top. In April, 1886, Hilton Brothers, in order to secure an unlimited supply of water for their creamery, drilled a two-inch well to the depth of two hundred and fifteen feet. Much to their surprise the water shot out of the ground fifty-three feet into the air. This unexpected event caused much comment in that part of the State. Quick to capitalize this unforeseen asset, Hilton Brothers soon had the flowing water circulating all over their premises and used it for refrigeration as well as for fire protection.

Certain citizens who lived in the best residential section of Belle Plaine next organized a company to drill a well in their part of town and supply water to the whole neighborhood. The location, being on a hill, would provide plenty of fall to afford pressure for circulation. They struck water at a depth of two hundred and ninety feet but it would not rise above the surface. While they were attempting to use the well with the aid of pumps several successful artesian wells were drilled on a lower level. A well in front of the Tremont House filled the two-inch casing and boiled out of a forty-five foot one-inch pipe placed on top of that. The canning factory likewise put down a well and had water flowing all over the plant and from numerous jets and fountains.

The merchants on First Street, realizing the need of better fire protection, decided to organize two stock companies to drill wells for that purpose. One company included all of the business men on the main street east of the center of the block between Beech and Maple streets while the other was composed of the merchants west of that point. The former company put down a three-inch well which reached water at two hundred and twenty-five feet. This well, flowing at the rate of two hundred and fifty gallons per minute made a beautiful fountain as the water rose many feet in the air. The pressure was sufficient to force water through one thousand feet of hose without noticeable loss of pressure.

All of the wells preceding Jumbo were in the north and central parts of the city, while the south side near the schoolhouse was without any water for fire protection. Thereupon, the citizens in that section signed an agreement to pay equal amounts, not to exceed one hundred and seventy-five dollars, to be expended in drilling a well. The school district was a party to the arrangement and the city agreed to place the well in condition for use. William Weir and Sons of Monticello received the contract from the city which called for a three-inch well at Beech and Washington streets. The other wells that Weir and Son had drilled were all two-inch; but when they readily accepted the contract the city supposed that they had the proper drills to put down a three-inch well.

They began work at once, using their regular two-inch drill. To quiet the inquisitiveness of the on-lookers, the drillers explained that they intended to ream out the shaft to the required three inches. After going down a considerable distance they drove in sixty feet of three-inch casing by force, and continued to drill through the casing until they struck water at the depth of one hundred and ninety-three feet. The top section of the casing had been injured while they were working, so they unscrewed it at the first joint and attempted to put in a new one. But the casing would not go in again without the application of force. Exasperated at this difficulty, the drillers determined to let the

force of the flow ream out the two-inch hole. Suiting action to the idea they left the scene and were gone all afternoon, while the water continued its work. This was on August 26, 1886.

Late that evening passersby became alarmed at the increasing flow of water, hunted up the drillers, and advised them to put on the top section of casing. After much hard work this was accomplished and they left for the night.

The next day Weir came back and raised the sixty-foot pipe already in and commenced churning it up and down in order to put in additional three-inch pipe. Much to his surprise the water burst up from outside the casing and could not be controlled. At four o'clock Weir went up town. Jumbo was a monster already. Water, sand, and rocks were boiling out. Men were put to work keeping ditches open to carry off the water but it was an impossible task.

After a while Weir came back to look at the well. Apparently one look was enough for he immediately hitched up his team and drove off. At six o'clock the water was coming out in great torrents. At seven Weir had not come back and the people were becoming alarmed. The white elephant "was throwing a stream a foot and one-half in diameter to the height of five feet above the surface." No one knew whether Weir had deserted or had gone for something to work with. "At eight the people were almost crazy!" They appealed to the mayor to

save them. The mayor called a special meeting of the council at once. Some one suggested getting a pile driver and filling the well with piling. That seemed so plausible that the council spent several days trying to secure a pile driver.

Despite the efforts of the council, Jumbo was not to be quickly tamed. Many different means of subduing him were tried without success. "Large grain sacks filled with sand were tossed in and were thrown back out again as though they were mere feathers. Boiler flues, cones, all sizes of casings, hand pumps, common pumps, injector pumps, elevator pumps, and even the aid of Chicago's expert engineer failed to choke him."

It was estimated that the "eighth wonder of the world", as the residents of Belle Plaine were pleased to call it, was running five million gallons every twenty-four hours. It required two streams twelve feet wide and a foot deep flowing at the rate of ten miles per hour to carry the water to the Iowa River. Workmen had a hard time keeping the ditches open, for Jumbo was constantly throwing out wood, bones, weeds, and pebbles. Sand stood four feet deep in the streets. Small boys reaped a financial harvest by bottling some of the pebbles and selling them as souvenirs to the hundreds of visitors who came from afar to see the natural fountain spouting water five feet in the air from a hole fully three feet in diameter. One visitor, becoming too eager, stepped off the planks and fell into the well, but he reported

that he came out just as fast as he went in, though he was badly scared. It has been estimated that Jumbo deposited from five hundred to one thousand car loads of sand on the near-by streets and lawns.

Jumbo soon gained much notoriety abroad. Newspapers reported "water spouting hundreds of feet in the air, with a roar that could be heard for miles." They went so far as to picture people being rescued by boats from the upper stories of houses. One imaginative reporter connected the outburst of the well with the Charleston earthquake that occurred several days later. Other papers attributed the well and the earthquake, as well as renewed geyser activity in Yellowstone Park, all to a common movement of the earth's crust.

Many people were using the water for medicinal purposes despite the conclusions of the doctors and chemists that it was not fit to drink. It had a strong mineral taste but was very clear. There was a continual procession of people going to the well both day and night to fill their pails, pitchers, and jugs. Others, living farther away, shipped kegs and barrels to Belle Plaine to be filled in order that they might "drink and live". One such person said, "having inherited a bilious temperament I have been compelled to take medicine for years." But after drinking this mineral water he "found himself perfectly well and cured from all previous ailments." Another wrote that the doctors gave him only four weeks to live, but after using the mag-

netic mineral water his troubles were all gone and his health much improved. A third added that his rheumatism had entirely disappeared and he had no further use for a cane.

In the meantime the city council had taken charge of operations. Mr. Weir had left the neighborhood. The council decided to receive sealed bids for a contract to close the well. The bids were opened on October 20th, and the contract was awarded to L. King of Marshalltown. He was to do the work in ninety days and was to receive the sum of \$2000. King came on the scene and at once built a high board fence around the well. He next obtained a diver's suit and was going to charge an admittance fee to see the performance. But the city council put a stop to this by reminding him that he was hired to control the well and not to make a show of it.

Mr. King worked continuously until May 20, 1887, but failed to stop the well entirely. At that time he notified the council that he was ready to give up and close the contract. A committee appointed by the council investigated and reported that the well "was not and had never been under control." King then offered to settle for eighteen hundred and sixty-two dollars, but the council refused. They were quite willing to pay the contract price when the well was under control. King answered that he would not touch the well again and threatened suit. The council was advised not to yield, however, so

another driller decamped and the city again had the "white elephant" on its hands.

The council finally decided to superintend operations and hired the Palmer Brothers, who operated a foundry in Belle Plaine, to do the work. After some further delay in obtaining equipment, ninety feet of eight-inch pipe was put down inside of the sixteen-inch flue casing already in the well. Between the two pipes was a contrivance devised by the Palmers, consisting of two flanges, one of which was fastened to the bottom section of casing and the other was connected with a hydraulic jack. The space between the two flanges was then filled with hemp which was packed in tightly with the jack. This stopped the flow of water between the pipes and caused all the water to come out of the smaller pipe. The remaining space between the two casings was filled with cement and sand and the job was done.

Jumbo was finally choked! He breathed his last on October 6, 1887, after having been rampant for a year and two months. In this time he had consumed one hundred and sixty-three feet of eighteen-inch pipe, seventy-seven feet of sixteen-inch pipe, sixty feet of five-inch pipe, an iron cone three feet in diameter and twenty-four feet long, besides forty carloads of stone, one hundred and thirty barrels of cement, and an inestimable amount of sand and clay.

Many people thought that the well had tapped an

aqueduct leading from some large and distant body of water. Others were quite sure that the water came from an underground channel of the Cedar River probably developed below Waterloo. Another theory was that a great fault in the earth's crust had raised up the deep, underlying veins of ground water so that they were near the surface.

Professor T. C. Chamberlain of Chicago, who made a personal examination of Jumbo, and the many other wells in the Belle Plaine artesian area, came to a different conclusion. Jumbo, he said, "is simply a flowing drift well, run rampant for want of control. It has its phenomenal feature in its magnitude and its lesson in its expensive and destructive career through injudicious handling."

Other geologists agreed with Chamberlain that Jumbo was merely one in a thousand of such flowing drift wells in Iowa. The retreating glaciers left beds of sand which acted as the aquifers for the wells. These sheets of sand were inclined underground. They become covered with "impervious clay" by later glacial invasions which converted them into channels for artesian waters. Professor W. H. Norton adds that artesian wells of this class are directly dependent upon the rainfall of the region and should show corresponding fluctuations in flow.

Although scientists made a commonplace thing of the awe of the masses and the delight of the youngsters, Jumbo has not lost his glamour. Old timers

still recall his greatness and the way he baffled the experts when they endeavored to control him. But now he lives only in memory. The asphalt paving passes over his grave and the curb is his only headstone.

RUSSELL C. GRAHAME.